

What is claimed is:

1. A method for operating a washing machine having a washing basket mounted for rotation within a stationary tub, the washing basket having an open rim and a basket wall containing a plurality of holes therein, a quantity of washing fluid being within the washing basket, and one or more fabrics being within the washing basket for being washed, a flexible stationary boot seal being positioned closely adjacent the rim of the washing basket, the method comprising:
 - rotating the washing basket within the stationary tub and relative to the boot seal at a first rotational speed insufficient to plaster the fabrics against the basket wall in response to centrifugal force;
 - gradually increasing the rotational speed of the washing basket to a second rotational speed sufficient to cause the fabrics to be plastered against the basket wall in response to centrifugal force;
 - increasing the rotational speed of the washing basket to a third rotational speed higher than the second rotational speed;
 - reducing the rotational speed of the washing basket to the second rotational speed;
 - draining the washing fluid from the washing basket; and
 - beginning a spin cycle by rotating the basket at a fourth rotational speed greater than the first, second, and third rotational speeds and sufficient to cause the washing fluid to be extracted from the fabrics and to move outwardly through the holes in the washing basket wall in response to centrifugal force.

2. The method according to claim 1 and further comprising checking for an imbalance condition of the fabrics within the washing basket while the washing basket is rotating at the second rotational speed and after the draining step.

3. The method according to claim 2 and further comprising stopping the rotation of the washing basket when an imbalance condition is sensed, and then increasing the rotational speed of the washing basket to the second rotational speed.

4. The method according to claim 2 wherein the step of checking for an imbalance condition comprises sensing whether or not there is a torque change or a rotational speed change of the washing basket while rotating at the second rotational speed.

5 5. The method according to claim 1 and further comprising checking for a high torque or rotational speed lower than the fourth rotational speed during the spin cycle.

6. The method according to claim 1 wherein the first rotational speed is approximately 50 rpm.

10 7. The method according to claim 6 wherein the second rotational speed is approximately 85 rpm.

8. The method according to claim 7 wherein the third rotational speed is approximately 100 rpm.

15 9. A method for operating a washing machine having a washing basket mounted for rotation within a stationary tub, the washing basket having an open rim and a basket wall containing a plurality of holes therein, a quantity of washing fluid being within the washing basket, and one or more fabrics being within the washing basket for being washed, a flexible stationary boot seal being positioned closely adjacent the rim of the washing basket, the method comprising:

20 rotating the washing basket at a tumble speed insufficient to cause the fabrics to become

plastered against the basket wall in response to centrifugal force but instead to

25 tumble within the washing basket during rotation;

maintaining the washing fluid within the washing basket;

increasing the rotational speed of the washing basket to a plaster speed sufficient to cause the fabrics to become plastered against the basket wall in response to centrifugal force;

30 draining the washing fluid from the washing basket;

sensing whether or not the fabrics create an imbalance condition during the rotation of the washing basket at the plaster speed;
reducing the rotational speed of the washing basket for a predetermined time interval to the tumble speed in response to sensing an imbalance condition during the rotation of
5 the basket at the plaster speed, whereby the fabrics cease being plastered against the basket wall but instead tumble within and redistribute within the washing basket;
resuming the plaster speed after the predetermined time interval;
increasing the rotational speed to a spin speed sufficient to cause the washing fluid within
10 the fabrics to be extracted and pass out of the washing basket through the holes in the wall of the washing basket.

10. The method according to claim 9 and further comprising sensing for increased torque of the rotating washing basket caused by the fabrics frictionally engaging the flexible boot during rotation of the washing basket at the spin speed, and stopping the
15 rotation of the washing basket in response to sensing the increased torque.

11. The method according to claim 9 and further comprising sensing for a reduced rotational speed of the washing basket caused by the fabrics frictionally engaging the flexible boot during rotation of the washing basket at the spin speed, and stopping the
20 rotation of the washing basket in response to sensing the reduced rotational speed of the washing basket.

12. A method for operating a washing machine having a washing basket mounted for rotation within a stationary tub, the washing basket having an open rim and a
25 basket wall containing a plurality of holes therein, a quantity of washing fluid being within the washing basket, and one or more fabrics being within the washing basket for being washed, a flexible stationary boot seal being positioned closely adjacent the rim of the washing basket, the method comprising:
rotating the washing basket at a spin speed sufficient to cause the washing fluid within the
30 fabrics to be extracted and pass out of the washing basket through the holes in the wall of the washing basket;

sensing for either increased torque or reduced rotational speed of the washing basket
caused by the fabrics frictionally engaging the flexible boot during rotation of the
washing basket at the spin speed; and
stopping the rotation of the washing basket in response to the sensing of increased torque
5 or reduced rotational speed of the washing basket.

13. The method according to claim 12 wherein the sensing step comprises
sensing an increase in torque above a predetermined threshold or sensing a reduction of
rotational speed below a predetermined rotational speed level.

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14. A washing machine for laundering fabrics comprising:
a stationary outer tub;
an inner washing basket having a basket wall, holes within the basket wall, and an annular
basket rim defining an open end to the washing basket, the inner washing basket
15 being mounted for rotation within the stationary outer tub;
a washing fluid within the washing basket;
a boot seal attached to the outer tub, the boot seal being positioned closely adjacent the
annular rim of the washing basket;
a motor for rotating the washing basket at a tumble speed wherein fabrics within the
20 washing basket are tumbled but do not become plastered against the washing basket
wall in response to centrifugal force, and at a plaster speed wherein the fabrics
within the washing basket are plastered against the washing basket wall and at a
spin speed wherein the fabrics are plastered against the washing basket wall and the
washing fluid within the fabrics is extracted from the fabrics and exits the holes in
25 the washing basket in response to centrifugal force;
a sensor for sensing either an increased torque of the washing basket or a reduced rotational
speed of the washing basket caused by the fabrics frictionally engaging the boot
seal while the washing basket is spinning at the spin speed;
a controller connected to the sensor and the motor for causing the motor to rotate the
30 washing basket at either the tumble speed, the plaster speed, or the spin speed;

the controller causing the stopping of the rotational speed of the washing basket in response to the sensor sensing either the increased torque or the reduced rotational speed of the washing basket.

- 5 15. The washing machine according to claim 14 and further comprising a drain for draining fluid from the washing basket, the controller causing the motor to rotate the washing basket at a plurality of plaster speeds while washing fluid is within the washing basket, and to cause the washing fluid to be drained from the washing basket before causing the motor to rotate the washing basket at the spin speed.

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